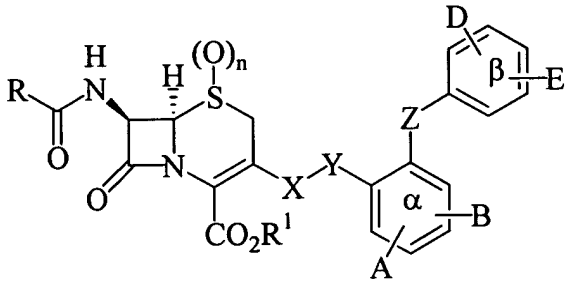
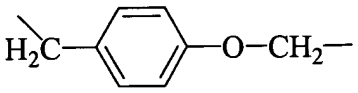
1. (Amended) A compound of the following structure:



wherein n is 0, 1 or 2;

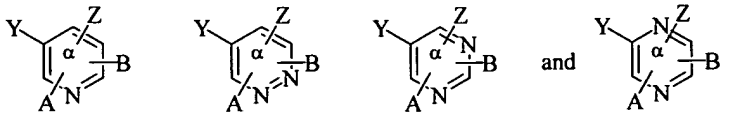
wherein A, B, D, and E are independently the same, different or absent and are selected from the group consisting of a halogen, H, CN, NO_2, CF_3, C(O)H, $N(R^2)_2$, $C(O)CH_3$, and OR^2, wherein R^2 is selected from the group consisting of H, lower alkyl, alkenyl group, and alkynyl group;

wherein X is selected from the group consisting of CH_2, *cis*-CH=CH-CH_2-, *trans*-CH=CH-CH_2, -CH_2-O-C(O)-, -NH-C(O)-O-, $-C\equiv C-CH_2$, PO_2, -SO_2-, -NH-CH_2-CH_2-CH_2-NH-CO-, traceless Linker, and  ;

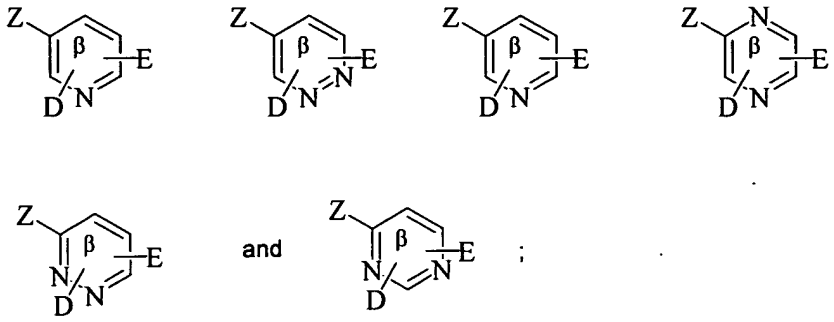
wherein Y is selected from the group consisting of -O-, -S-, and NR^3, wherein R^3 is selected from the group consisting of H, lower alkyl, alkenyl group, and alkynyl group;

wherein Z is selected from the group consisting of -O-, -C(O)-, -S-, α-C(O)-$N(R^4)$-β, α-$N(R^4)$-C(O)-β, and $N(R^4)$, wherein R^4 is selected from the group consisting of H, OH, R^5, and OR^5, wherein R^5 is selected from the group consisting of H, lower alkyl, alkenyl group, and alkynyl group;

wherein ring α connects Y to Z and is a benzene or a heterocycle selected from the group consisting of

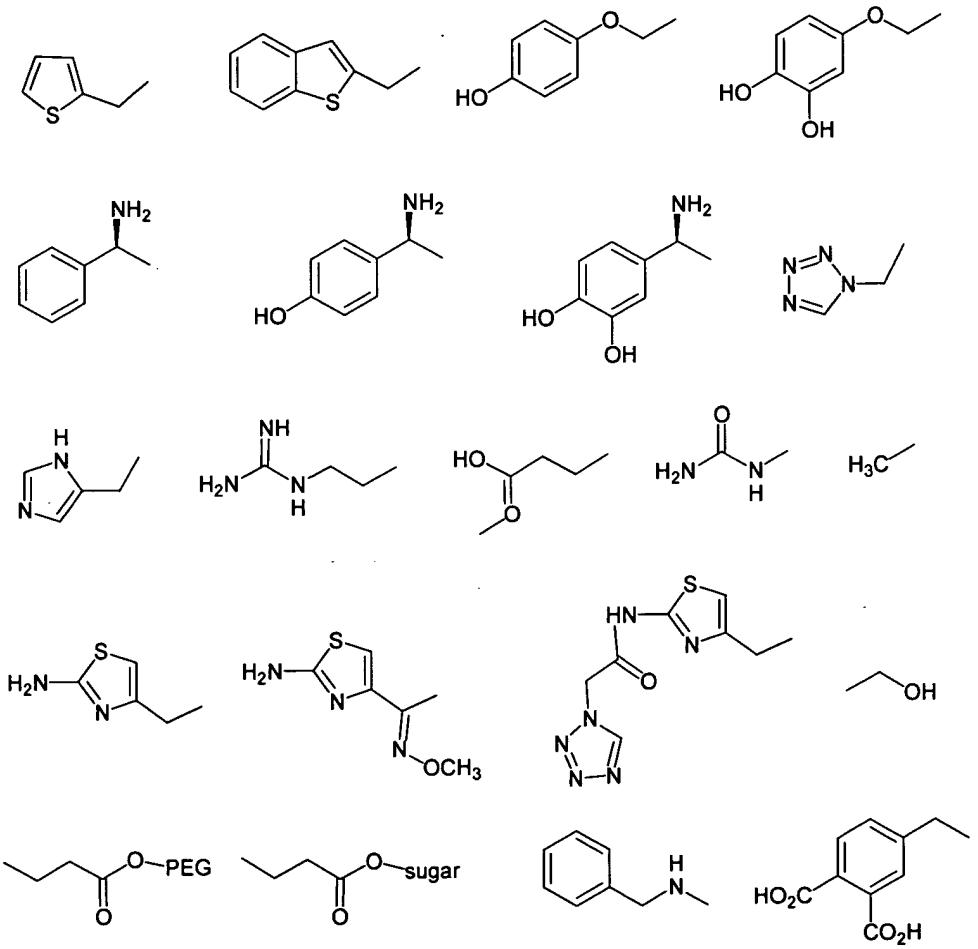


wherein ring β connects to Z and is a benzene or a heterocycle selected from the group consisting of



wherein R is selected from the group consisting of Ph-, $PhCH_2$- and $PhOCH_2$; or a

A2 structure selected from:



wherein R^1 is selected from the group consisting of H, Li, Na, sugar, THAM (2-amino-2-hydroxymethyl-1,3-propanediol), ammonium, methylamine, dimethylamine, lower alkylamine, bis(lower alkyl)amine and polyethylene glycol (PEG); and pharmaceutically acceptable salts of the compounds.

A2

41. (Amended) A method of inhibiting the growth of a bacterial microorganism comprising contacting the microorganism with an effective amount of the compound of claim 1.

A3

43. (Amended) The method of claim 42, wherein the microorganism is selected from the group consisting of *Staphylococcus aureus, Staphylococcus epidermidis* and other coagulase-negative staphylococci, *Streptococcus pyogenes, Streptococcus pneumoniae, Streptococcus agalactiae, Enterococcus* species, *Corynebacterium diphtheriae, Listeria monocytogenes, Bacillus anthracis, Neisseria meningitidis, Neisseria gonorrhoeae, Moraxella catarrhalis, Vibrio cholerae, Campylobacter jejuni, Enterobacteriaceae, Pseudomonas aeruginosa, Acinetobacter* species, *Haemophilus influenzae, Clostridium tetani, Clostridium botulinum, Bacteroides* species, *Prevotella* species, *Porphyromonas* species, *Fusobacterium* species, *Mycobacterium tuberculosis, and Mycobacterium leprae*, with the proviso that when the compound is 3-(2-(2,4-dichlorophenoxy)-5-chlorophenoxy)methyl-7-(2-thienylacetamido)-3-cephem-4-carboxylic acid, the microorganism is not *Pseudomonas aeruginosa.*

A4

44. (Amended) The method of claim 41, wherein the bacterial microorganism is vancomycin resistant, tolerant or sensitive.

46. (Amended) A method for inhibiting penicillin binding proteins in an infected cell comprising contacting the cell with an effective amount of claim 1.

A5